AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1.   (Currently Amended) An image processing device comprising:

a character recognition unit that recognizes character codes from character images in image data;

a conversion unit for converting character images to character code data according to character codes; and

a judgment unit that obtains a degree of character continuity, which is a degree of continuity between a character image and neighboring character images thereof, for any character image for which a character code has been recognized by said character recognition unit, and that makes a judgment ~~on whether~~, based on the degree of character continuity, <u>whether</u> said character image should be represented by character code data ~~or should be represented by image data.~~

2.   (Previously Presented) An image processing device as claimed in claim 1, wherein

said judgment unit obtains said degree of character continuity based on at least one of:

a distance between said character image for which a character code has been recognized and neighboring character images thereof;

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a difference in font size between said character image for which a character code has been recognized and neighboring character images thereof;

a difference in font type between said character image for which a character code has been recognized and neighboring character images thereof;

a length of a character string in which said character image for which a character code has been recognized exists; and

a difference in color between said character image for which a character code has been recognized and neighboring character images thereof.

3.   (Original) An image processing device as claimed in claim 1, wherein said judgment unit makes a judgment to convert said character image into character code data when said degree of character continuity is larger than a first prescribed value.

4.   (Previously Presented) An image processing device as claimed in claim 1, wherein

said character recognition unit detects a degree of character recognition certainty, which is a degree of certainty in recognizing a character code from a character image; and

said judgment unit makes the judgment further based on said degree of character recognition certainty.

5.   (Original) An image processing device as claimed in claim 4, wherein

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said judgment unit makes a judgment that said character image should be converted to character code data when said degree of character continuity is larger than a first prescribed value and said degree of character recognition certainty is larger than a second prescribed value.

6.   (Original) An image processing device as claimed in claim 5, further comprising:

a character image data generating unit that cuts out character images from said image data to generate character image data, wherein

said judgment unit makes a judgment that said character image data generating unit should generate said character image data for any character image whose degree of character continuity is larger than a third prescribed value, which is smaller than said first prescribed value, among character images judged not to be converted into character code data.

7.   (Original) An image processing device as claimed in claim 5, wherein said judgment unit makes a judgment that any character image whose degree of character continuity is smaller than a third prescribed value, which is smaller than said first prescribed value, should be left intact in said image data, among character images judged not to be converted into character code data.

8.   (Original) An image processing device as claimed in claim 1, further comprising:

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a file generating unit that generates an electronic file containing character code data converted by said conversion unit.

9.   (Currently Amended) A program product on a computer readable medium for image processing, said program product causing a computer to execute a process comprising the steps of:

1) recognizing character codes from character images in image data;

2) obtaining a degree of character continuity between a character image and neighboring character images thereof for any character image for which a character code has been recognized in said step 1); and

3) making a judgment ~~on whether~~, based on the degree of character continuity, <u>whether</u> said character image should be represented by character code data ~~or should be represented by image data~~.

10.   (Previously Presented) A program product as claimed in claim 9, wherein

said degree of character continuity is obtained in said step 2) based on at least one of:

a distance between said character image for which a character code has been recognized and neighboring character images thereof;

a difference in font size between said character image for which a character code has been recognized and neighboring character images thereof;

a difference in font type between said character image for which a character code has been recognized and neighboring character images thereof;

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a length of a character string in which said character image for which a

character code has been recognized exists; and

a difference in color between said character image for which a character code

has been recognized and neighboring character images thereof.

11.   (Previously Presented) A program product as claimed in claim 9,

wherein

a judgment is made in said step 3) that said character image should be

converted into character code data when said degree of character continuity is larger

than a first prescribed value.

12.   (Previously Presented) A program product as claimed in claim 9,

wherein

a degree of character recognition certainty is further detected in said step 1),

which is a degree of certainty in recognizing a character code from a character

image; and

a judgment is made at said step 3) on whether said character image should

be converted into character code data based on said degree of character continuity

and said degree of character recognition certainty.

13.   (Previously Presented) A program product as claimed in claim 12,

wherein

a judgment is made in said step 3) that said character image should be

converted into character code data when said degree of character continuity is larger

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than a first prescribed value and said degree of character recognition certainty is larger than a second prescribed value.

14.   (Previously Presented) A program product as claimed in claim 13, wherein

said process further comprising the step of:

4) cutting out character images from said image data to generate character image data, and

a judgment is made in said step 3) that character image data should be generated for any character image whose degree of character continuity is larger than a third prescribed value, which is smaller than said first prescribed value, among character images judged not to be converted into character code data.

15.   (Previously Presented) A program product as claimed in claim 13, wherein

a judgment is made in said step 3) that any character image whose degree of character continuity is smaller than a third prescribed value, which is smaller than said first prescribed value, should be left intact in said image data, among character images judged not to be converted into character code data.

16.   (Original) A program product as claimed in claim 9, wherein

said process further comprising the step of:

5) generating an electronic file containing character code data converted from said character images.

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17.   (Currently Amended) An image processing system, comprising:

a scanning device for scanning documents to obtain image data; and

an image processing device comprising:

a character recognition unit that recognizes character codes from character

images in image data;

a conversion unit for converting character images to character code data

according to character codes; and

a judgment unit that obtains a degree of character continuity, which is a

degree of continuity between a character image and neighboring character images

thereof, for any character image for which a character code has been recognized by

said character recognition unit, and that makes a judgment on whether, based on the

degree of character continuity, whether said character image should be represented

by character code data or should be represented by image data.

18.   (Original) An image processing system as claimed in claim 17,

wherein

said image processing device further comprises a file generating unit that

generates an electronic file containing character code data converted by said

conversion unit; and

said image processing system further comprises a printer that prints images

based on said electronic file.

19.   (Previously Presented) An image processing device as claimed in claim 1, wherein the image data representing said character image is any one of input image data and character image data.

20.   (Previously Presented) A program product as claimed in claim 9, wherein the image data representing said character image is any one of input image data and character image data.

21.   (Previously Presented) An image processing system as claimed in claim 17, wherein the image data representing said character image is any one of input image data and character image data.

22.   (Currently Amended) An image processing method comprising the steps of:

1) generating character code data of a character image from original image data;

2) conducting an image processing on the original image data of the character image to generate ~~generating~~ character image data of the character image ~~from the original image data~~; and

3) employing at least one of the original image data, the character image data, and the character code data to represent the character image.

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23. (Previously Presented) An image processing method as claimed in claim 22, wherein, in the step 3), one of the original image data, the character image data, and the character code data is selected to represent the character image.

24. (New) An image processing method as claimed in claim 22, wherein the image processing in the step 2) includes a binarization process of the original image data.

25. (New) An image processing method as claimed in claim 22, wherein the image processing in the step 2) includes a noise removing process of the original image data.

26. (New) An image processing method as claimed in claim 22, wherein, in the step 1), the character code data is generated based on the character image data generated in the step 2).

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